



Australian Government

Geoscience Australia

The Australian Survey Report Format

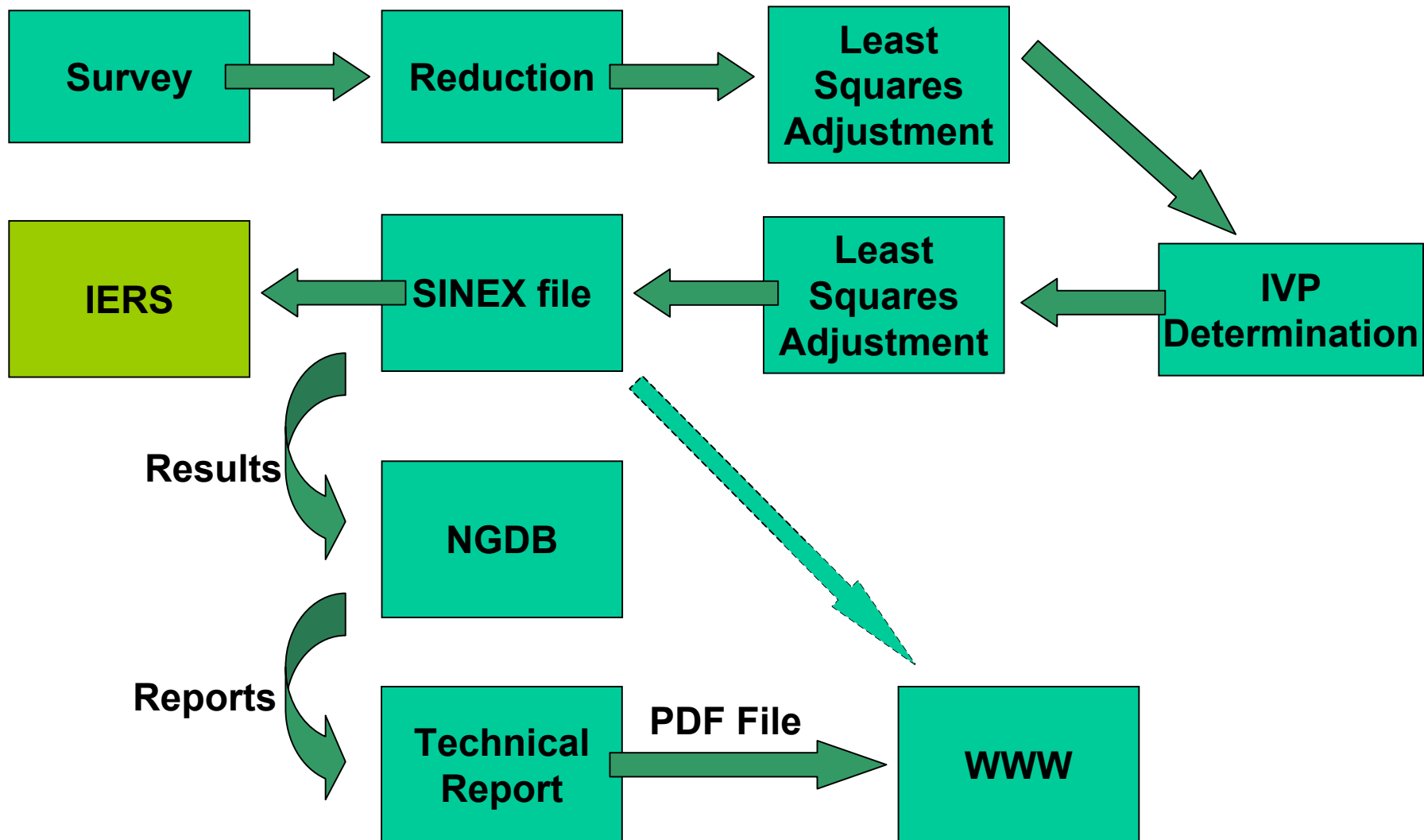
Geoscience Earth Monitoring

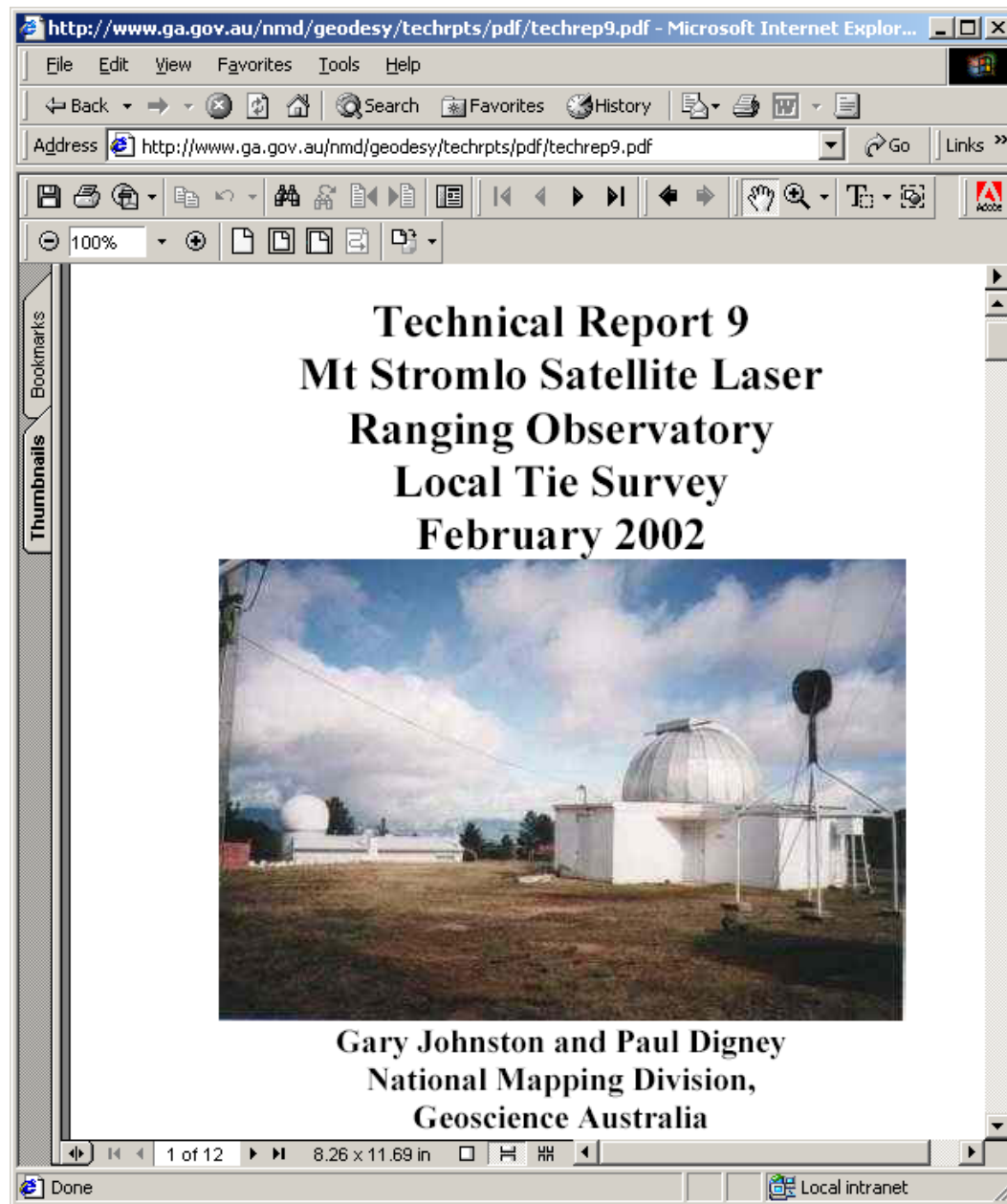
Gary Johnston, Paul Digney, Jim Steed, John Dawson

Overview

- Report generation process
- Site survey reports
 - Format
 - Content
- Survey database
- Report distribution

Report generation process





IERS Workshop on site co-location, Matera, Italy, Session 3 "Reporting"

Survey report format

- Background
 - Survey dates
 - Purpose of survey
- Observations
 - Equipment list
 - Observation types
 - Targets

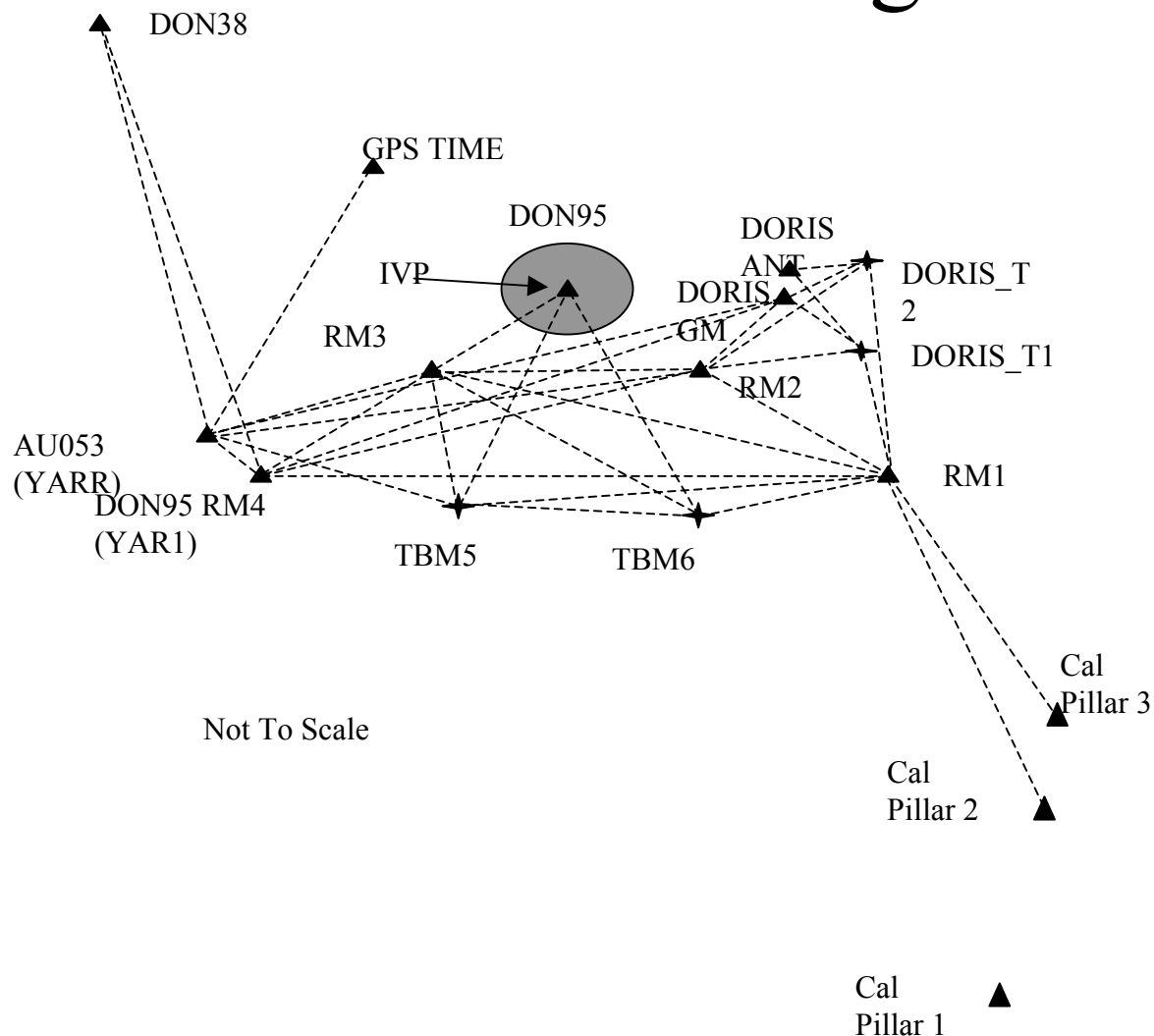
Survey report format

- Reductions
 - Observation corrections
 - Atmosphere
 - Prism offsets
 - GPS processing summary
- Calibrations
 - EDM
 - Offsets for Prisms and Tape

Survey report format

- Mark descriptions, eg.
 - ***AU053 (YARR)***: Domes 50107M006. The intersection of the top of the stainless steel plate with the vertical axis of a 5/8" Whitworth threaded stainless steel spigot. This pillar plate is set at ground level and is embedded in concrete to a depth of 400mm. The GPS – Glonass antenna currently occupies this monument.
 - ***DON95***: Domes 50107M001, CDP 7090. Punch mark in a circular brass plaque 0.080m in diameter set in concrete. The plaque is inscribed “Australian Survey Office Survey Mark” and is stamped DON 95. This is the primary reference point for the Moblas 5 SLR system.

Geodetic network diagram



Survey report format

- Results
 - Final coordinates and their precision
 - Geodetic, cartesian
 - Orthometric heights in local height datum
 - Inter-survey comparisons
 - Final conclusions

Survey database

- Results stored in the National Geodetic DataBase (NGDB)
 - Windows™ relational database of geodetic positions and associated information
- For Local Tie Survey marks:
 - Earth-centred Cartesian coordinates
 - Latitude, Longitude & ellipsoidal height automatically computed
 - Reference frame & epoch
 - Referenced to source of positions (Sinex file)
 - Exact mark descriptions
 - Images & diagrams

Survey database

Report generated from NGDB

- All coordinates at the facility linked for easy report extraction
- Report content is user definable
 - CSV format (Excel)

The image displays two software windows. The top window, titled 'Find by Area - Ver. 1 (build 18) Copyright 2000 AUSLIG Klaus P. Voigt', is a search utility. It has a 'Find Facility' text box containing 'YARAGADEE' and a list of facilities below it: 'ABSLMA', 'AFN', 'AFN/ANN', and 'AHD TG BM'. To the right of this window is a vertical list of geodetic coordinates and sources, including 'AGD66', 'AGD84', 'ASTRO', 'ASTRO(PNG)', 'CLARKE', 'CLARKE (TAS)', 'GDA84', 'ITRF2000', 'ITRF91', 'ITRF92', 'ITRF93', 'ITRF96', 'ITRF97', 'LOCAL', 'NSWC82', 'WGS72', and 'WGS84'. The bottom window is a Microsoft Excel spreadsheet titled 'Moblas5.csv'. It contains a table with 12 columns: 'Sequence', 'Position', 'Unique', 'Name_1', 'Name_2', 'Name_3', 'Datum', 'X', 'Y', 'Z', and 'Ep'. The table lists several survey points, including 'MOBLAS 5 PILLAR 2', 'MOBLAS 5 PILLAR 1', 'YAR1', 'DOMES 50107M004', 'DOMES 50107M001', 'DOMES 50107M006', and 'Calibration Prism 1'. The status bar at the bottom of the Excel window indicates '23 of 61 records found'.

	A	B	C	D	E	F	G	H	I	J	
1	Sequence	Position	Unique	Name_1	Name_2	Name_3	Datum	X	Y	Z	Ep
27	18947	2		MOBLAS 5 PILLAR 2			ITRF97	-2389071	5043377	-3078398	
29	18948	2		MOBLAS 5 PILLAR 1			ITRF97	-2390447	5044260	-3075922	
35	19042	4	YAR1	AU029	DOMES 50107M004	DON 95 R	ITRF97	-2389026	5043317	-3078531	
40	19044	3		YARAG	MOBLAS 5		ITRF97	-2389008	5043332	-3078526	
47	19889	3		DONGA	DOMES 50107M001	BM 100	ITRF97	-2389007	5043329	-3078525	
49	44948	1		AU053	DOMES 50107M006		ITRF97	-2389024	5043315	-3078534	
51	44949	1		Calibration	Prism 1		ITRF97	-2390447	5044260	-3075922	

Distribution

- Survey reports located at www.ga.gov.au
- SINEX format results files located at [ftp.ga.gov.au/sgac/sinex/ties](ftp://ftp.ga.gov.au/sgac/sinex/ties)